

## CLAIMS

1. Crosslinkable silicone composition useful especially as a varnish which in particular has anti-friction properties, said composition being of the type comprising on the one hand at least two organosilicon species A and B which react with one another in the presence of a catalyst C to allow crosslinking, at least one of these two species consisting of a polyorganosiloxane (POS), and on the other hand at least one particulate component D, characterized in that:
- this composition is of the type crosslinkable by polyaddition;
  - the particulate component D is selected from the group comprising powdered (co)polyamides - preferably (co)polyamides 6, 12 and 6/12 - defined as follows:
    - the particles are of substantially rounded shape, and
    - the mean particle diameter  $\Phi_{md}$  is between 0.1 and 200  $\mu\text{m}$ , preferably between 5 and 100  $\mu\text{m}$  and particularly preferably between 10 and 50  $\mu\text{m}$ ;
  - it also contains at least one other particulate component E selected from the group comprising powdered silicas having a mean particle diameter  $\Phi_{md}$  of about 0.1  $\mu\text{m}$  or less, and a BET specific surface area greater than 50  $\text{m}^2/\text{g}$ , preferably of between 50 and 400  $\text{m}^2/\text{g}$  and especially of between 150 and 350  $\text{m}^2/\text{g}$ .
2. Composition according to claim 1, characterized in that the particulate component D is present in an amount of 0.1 to 20% w/w, based on the total weight of the composition.
3. Composition according to claim 1 or 2, characterized in that the particulate component E is present in an amount of 0.001 to 5% w/w, based on the total weight of the composition.
4. Composition according to any one of claims 1 to 3, characterized in that it comprises:
- (A) 100 parts by weight of at least one polyorganosiloxane (POS) having at least two alkenyl groups, preferably  $\text{C}_2\text{-C}_6$  alkenyl groups, bonded to the silicon in each molecule;
  - (B) 1 to 50 parts by weight of at least one polyorganosiloxane having at least three hydrogen atoms bonded to the silicon in each molecule;
  - (C) 0.001 to 1 part by weight of at least one catalyst preferably composed of at least one metal belonging to the platinum group;
  - (D) 0.1 to 20 parts by weight of at least one particulate component consisting of

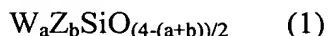
(co)polyamide;

- (E) 0.001 to 5 parts by weight of at least one siliceous particulate component;
- (F) 0 to 30 parts by weight of at least one adhesion promoter;
- (G) 0 to 1 part by weight of at least one crosslinking inhibitor;
- (H) 0 to 10 parts by weight of at least one polyorganosiloxane resin;
- (I) optionally at least one functional additive for imparting specific properties.

5. Composition according to any one of claims 1 to 4, characterized in that the dynamic viscosity  $\eta$  (mPa.s at 25°C) of its silicone phase, consisting of the POS A and B and optionally the components H or I, is such that:

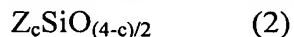
preferably  $200 \leq \eta \leq 3000$ ,  
and particularly preferably  $300 \leq \eta \leq 2000$ ,  
 $400 \leq \eta \leq 900$ .

6. Composition according to any one of claims 1 to 5, characterized in that the one or more POS A and the optional resins H have siloxy units of the formula



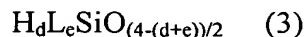
in which:

- the symbols W, which are identical or different, are each an alkenyl group and preferably a C<sub>2</sub>-C<sub>6</sub> alkenyl;
- the symbols Z, which are identical or different, are each a non-hydrolyzable monovalent hydrocarbon group that is devoid of an unfavorable action on the activity of the catalyst, is optionally halogenated and is preferably selected from alkyl groups having from 1 to 8 carbon atoms inclusive, and from aryl groups;
- a is 1 or 2, b is 0, 1 or 2 and a + b is between 1 and 3;
- optionally at least some of the other units are units of the empirical formula



in which Z is as defined above and c has a value of between 0 and 3.

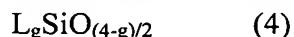
7. Composition according to any one of claims 1 to 6, characterized in that the one or more POS B have siloxy units of the formula



in which:

- the symbols L, which are identical or different, are each a non-hydrolyzable monovalent hydrocarbon group that is devoid of an unfavorable action on the activity of the catalyst, is optionally halogenated and is preferably selected from alkyl groups having from 1 to 8 carbon atoms inclusive, and from aryl groups;
- d is 1 or 2, e is 0, 1 or 2 and d + e has a value of between 1 and 3;

- optionally at least some of the other units being units of the empirical formula



in which L is as defined above and g has a value of between 0 and 3.

- 5 8. Composition according to any one of claims 1 to 7, characterized in that the alkenyl groups W of the POS A and the optional POS resins H are vinyl groups Vi carried by siloxy units D and optionally M and/or T.
9. Varnishing process, characterized in that the composition according to any one of
- 10 claims 1 to 8 is applied, as an anti-friction varnish, to a substrate optionally coated with at least one layer of silicone elastomer.
10. Process according to claim 9, characterized in that it consists essentially in:
  - coating the substrate with the composition according to any one of claims 1 to
  - 15 8,
  - crosslinking the layer of varnish, optionally with thermal activation,
  - and optionally repeating the above steps at least once.
11. Process according to claim 9 or 10, characterized in that the varnish composition is
- 20 applied to the substrate at a coating rate less than or equal to 25 g/m<sup>2</sup> and preferably of between 5 and 20 g/m<sup>2</sup>.
12. Composite obtainable by the process according to any one of claims 9 to 11, characterized in that it comprises:
  - 25 - a substrate,
  - optionally a coating firmly fixed to at least one side of the substrate and consisting of at least one layer of silicone elastomer,
  - at least one layer of varnish based on the composition according to any one of
  - 30 claims 1 to 8.
13. Composite according to claim 12, characterized in that the substrate is a flexible substrate preferably selected from the group comprising:
  - textiles,
  - non-woven fibrous substrates,
  - 35 - polymer films, particularly polyester and polyamide.
14. Manufactured article, characterized in that it contains composite according to claim 12 or 13.